Enhancing Education Through Technology (EETT)
Competitive Sub-grant Application Assurance Sheet

Project Title: Enhancing Math, Science, Geography and Technology at Horseshoe Bend Schools Amount of Request: $ 52,980

District Name (Fiscal Agent for Consortiums): Horseshoe Bend Number: 73

Please list the school name, and indicate whether it is a targeted school or a partner school and certify the CIPA compliance for all participating schools within the project:

Dist. # or 'P' for Private School	School Name	This school is a targeted school 'T' or a partner school 'P'.	This school is in compliance with the CIPA as outlined on page 3 of the guidance document.
73	Horseshoe Bend	(T) P	(YES) NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO
		T P	YES NO

I certify that we have contacted the charter and private schools in our area about participation in this grant.

Superintendent Name	E-mail	Telephone
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Signature: Scott Mutchie		
District Technology Coordinator Name	**E-mail**	**Telephone**
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Project Director Name (if different than District Technology Coordinator)	**E-mail**	**Telephone**
Karen Garner	garnerk@hsbschools.org	208-407-4142
Signature: Karen Garner		

Abstract:

Horseshoe Bend School District #73 is a rural, Title I school district educating 324 students grades PreK-12. The district's population is considered disadvantaged and underserved with 52% of students receiving free/reduced lunch. Because of its rural location and low socio-economic level, Horseshoe Bend Schools face many challenges in serving the social and educational needs of its students in order to meet and try to exceed NCLB standards and Idaho Content Standards. Fluctuating enrollment, average daily attendance issues and strained resources have limited opportunities for the students to engage in innovative and expensive technological advances. Despite these constraints, however, the students at Horseshoe Bend must still find a place in an ever-increasing global economy dominated by workers with the ability to apply advanced technologies and solve increasingly complex problems. Other countries are investing heavily to create scientifically and technically literate work forces. To keep pace in global markets, Horseshoe Bend Schools need to have the ability to train and prepare an equally capable group of citizens.

The addition of the WeatherBug School Program at Horseshoe Bend Schools would accomplish the following goals:

1. Enhance math, science and geography education for all students K-12.
2. Increase development of technology skills for students K-12 and their teachers.
3. Increase enthusiasm for science/mathematics through hands-on, web-based learning opportunities in core content areas.
4. Increase parental involvement and encourage the home/school connection by providing the entire community with a unique and valuable resource for real-time local weather conditions and safety alerts along with the ability to access school lessons from home.

Horseshoe Bend Schools is requesting funding to purchase the WeatherBug Schools Program. The WeatherBug Program will place a state-of-the-art weather monitoring system at the school site. Real-time weather data will be used for enhanced mathematics, science, geography, and technology education. The program also includes WeatherBug Achieve--interactive K-12 lessons and activities with access on all school computers to the WeatherBug Program and the entire WeatherBug Network, comprised of more than 8,000 sites. Students will be able to go online to pull live data from the world's largest weather network. This ability to integrate real-world conditions and data into the classroom will help students grasp difficult educational concepts and improve problem solving skills while increasing student interest and achievement. WeatherBug Achieve's web-based instruction also provides a safe outlet for students to learn how to use the internet as a research tool within the confines of classroom-appropriate material. The lesson plans included in the program meet national standards and allow teachers to easily deliver standards-based lessons across multiple subjects to fulfill instructional objectives. Additionally, students' participation in these hands-on lessons helps develop important skills such as critical thinking and analysis which will lead to greater achievement in all areas of the curriculum transforming the district into one successfully competing in the 21st century.

Educational Need:

Horseshoe Bend Schools have endeavored to align the school's curriculum to meet state and national standards. Teachers and administrators are committed to implementing research-based learning objectives and teaching strategies. To accomplish the goal of meeting AYP standards in math, reading, science and technology, Horseshoe Bend faculty have realized the necessity of finding innovative approaches to student learning. Technology applications are a particularly good fit for accomplishing the task of creating innovative approaches to research-driven student learning. Specifically, the WeatherBug program uses real-time, real-world data to create an educational atmosphere of discovery and inquiry that is based on research validated methods. Technologically advanced teaching and learning strategies have been implemented within the district (Examples: Plato and Waterford Learning Software). The success of these programs has resulted in a continued district-wide commitment to technology. The school's commitment to improving students' performance through technology is based on data derived from the performance of Idaho students on National Assessment of Educational Progress (NAEP) as well as that of Horseshoe Bend students on the ISAT.

According to the **Idaho NAEP Snapshot 2007**:
Mathematics:
In both 4th and 8th grades, the number of Idaho economically disadvantaged students who scored at or above basic was 17% lower than the number of non-economically disadvantaged peers scoring at or above basic.

According to the **Idaho NAEP Snapshot 2005**:
Science:
In both 4th and 8th grades, the science scores for Idaho economically disadvantaged were lower than the scores of non-economically disadvantaged peers.
4th Grade: 17 points lower
8th Grade: 18 points lower

Fifty-six percent of students in Horseshoe Bend School District meet federal free and reduced lunch eligibility requirements (an indicator of poverty), while 10% of the students belong to a minority group including: Native American, Hispanic, and African American.

The lowest performing sub-group in the district continues to be the economically disadvantaged. The 2006-2007 Adequate Yearly Progress Report for Horseshoe Bend School District #73 provides further illustration:

Horseshoe Bend Elementary School: The school's goals were ***not*** met for the following:
Reading proficiency (white and economically disadvantaged sub-groups)
Math proficiency (economically disadvantaged sub-group)
3rd Indicator : Language Arts

ISAT Reading: 74.12% proficient (white)
57.5% proficient (economically disadvantaged sub-group)

Reading Status: Alert

ISAT Math: 67.5% proficient (economically disadvantaged sub-group)
Math Status: Alert

3rd Indicator: Language Arts 67.06% proficient (overall)
Language Arts Status: Alert

Horseshoe Bend Middle/High School: The school's goals were ***not*** met for the following:
Reading proficiency (economically disadvantaged sub-group)
Math proficiency (white and economically disadvantaged sub-group).

ISAT Reading: 70% proficient
Reading Status: Alert

ISAT Math: 64.77% proficient (white)
56% proficient (economically disadvantaged)
Math Status: School Improvement Year 1

Most recently, **Grades 5,7,10** participated in the **Science ISAT for Fall 2007** with the following results:

Science ISAT Results including Nature, Physical Science, Biology, Space, Technology:
Total Percent Scoring Proficient: 36.6% males, 37.5% females
5th Grade: 18 out of 28 students scored below or borderline for proficiency in science.
7th grade: 16 out of 23 students scored below or borderline for proficiency in science.
10th grade: 16 out of 30 students scored below or borderline for proficiency in science.

Technology Strand Results of the Science ISAT:
5th Grade: 50% not proficient in technology.
7th grade: 50% not proficient in technology.
10th grade: 40% not proficient in technology.

Although the ISAT Science Test does not count towards AYP this year, the U.S. Department of Education will require all states to include science in their yearly federal report in 2008. Furthermore a proficient or advanced score will be required by high school 10th graders to fulfill graduation requirements. Horseshoe Bend School District has recognized the urgent need for intervention in the areas of science, math and technology with scientifically proven research based methods that enhance metacognitive processes and the long-term retention of critical concepts in learning.

Additional Data:
Attendance: ADA for 06'-07' was 94%, 2% less than the needed 96% for funding. The school lost revenue and the salary of 1 teacher resulting in increased class size and larger student/teacher ratios. **Transportation**: 176 of the 324 students are transported by bus. **Title I**: 27 students (K-3) receive services in math/reading--no funding for upper grades.

<u>Local Project Detail</u>: WeatherBug will help students will get out of the textbooks and go online with an interactive, hands-on tool delivering lessons to teach math, science, and geography—all pulling live data from the world's largest weather network.

Student Achievement Objectives

- Students will increase achievement in math, science and geography.
- Students will increase development of technology skills.
- Students will use technology to complete self-paced WeatherBug Achieve lessons.
- Students will increase performance on ISAT reading, math, science tests.

Student Achievement Activities

- Students will gather, analyze, interpret and correlate weather related information.
- Students will use WeatherBug hardware and software to manage real time weather data.
- Students will complete self paced WeatherBug Achieve lessons.

Student Achievement Timeline

- Introduction to WeatherBug—Fall 2008
- K-12 Completing WeatherBug Achieve lessons by October 2008
- K-5 Using WeatherBug independently by Spring 2009
- 6-12 Using WeatherBug independently by Winter 2008

Data Collection Plan for Student Achievement

- Educators will track student achievement and progress throughout the year.
- Educators will collect ISAT scores and monitor achievement in math, reading, and science.
- Educators will use data from WeatherBug Achieve lessons/quizzes to monitor and record student progress in content standards including math, science, geography and technology.

Professional Development is of critical importance in achieving maximum use and benefit from the WeatherBug Program. Horseshoe Bend Schools will capitalize upon WeatherBug's significant experience in the development, coordination and execution of high-quality teacher training workshops.

Professional Development Objectives

- Educators will implement WeatherBug into the K-12 Math, Science, Geography, and Technology Curriculum.
- Educators will increase development of technology skills.
- Educators will employ WeatherBug technology successfully and troubleshoot as needed to resolve problems as they arise.

- Educators will utilize the WeatherBug tracking station and software to enhance their student's ability to gather, analyze, interpret and correlate information.

Professional Development Activities

- Educators will attend 2 days of hands-on, minds-on learning session at Horseshoe Bend provided by WeatherBug including: overview of the system and software training, explanation of all features, curriculum applications and classroom implementation, as well as troubleshooting.
- Educators will complete 17 At Your Convenience (AYC) web-based training modules covering all aspects of the WeatherBug Program (Ex: Equipment, Troubleshooting, WeatherBug Achieve Lessons and Projects, Manipulating Data, Spreadsheet, Excel, etc.).
- A lead teacher from each campus (elementary, middle school and high school) will be identified and attend additional training in order to be an additional local resource for teachers as needed.
- Interested educators within the district will attend workshops to receive training in the implementation of technology into the science and math curriculum.

Professional Development Timeline

- WeatherBug Program will be purchased by Fall 2008.
- WeatherBug Professional Development will start in Fall of 2008 with on-site training session and continue with web-based training throughout the year at teacher's convenience.
- Lead Teacher training will begin Fall 2008 and will include online lead teacher's kit with supplemental training materials and access to special features and online support pages including program resource information and education specialist contact information.
- Lead Teachers will attend professional development workshops in curriculum innovations in science, math and technology (ongoing).
- Substitute teachers will be provided beginning in Fall 2008 for educators who choose to attend training sessions to receive further instruction in math, science, and technology curriculum innovations and curriculum implementation (ongoing).

Data Collection Plan for Professional Development

- Educators will attend monthly meeting to discuss successful implementation and possible strategies to overcome barriers in the implementation of the technology in the classroom.
- Educators will document use of WeatherBug at least twice a month in lesson plans.
- Educators will use a check-list to document completion of AYC Learning Modules.
- Educators will document workshop training hours through duplication of training certificates.

Sustainability:

Horseshoe Bend School District has a proven track record of implementing and sustaining technological advances. (Plato has been used for 4 years. Waterford has been maintained for 8 years). Even though our district has limited funding, the importance of providing students with a quality education enhanced by the latest technological innovations has always been and will continue to be a priority for the educators and administration within the district.

Once the initial investment has been made for the WeatherBug Program, maintenance will require little additional funding, and there are no recurring costs. The school district will receive a lifetime site-license for all classrooms within the district—even if the district grows. The site-license includes the WeatherBug Achieve lessons which are continually monitored and updated to correlate with the latest state and national standards. Once purchased, the WeatherBug Program will be available to all students K-12, parents and staff from school, but also from their home and places of employment at no additional cost.

Further, the WeatherBug program offers unlimited web-based professional development modules which can be viewed as many times as needed from any computer with internet connection. This access to online training will be an invaluable resource as new faculty can be trained to use the program without additional professional development costs.

WeatherBug provides a full, one year comprehensive warranty on all parts of the weather station and lifetime technical supports. In the event that a part malfunctions after the warranty, the problem can be analyzed and identified remotely by WeatherBug technicians. WeatherBug replacement parts carry a minor replacement charge—most under $150.00. Horseshoe Bend School District is willing to replace parts from district funds.

The new computer equipment will be properly maintained throughout the life of the computer by the district's technology director. The color printer which is being purchased for K-5 campus will require the purchase of additional toner as the student's use the printer for mapping/graphing. The toner's cost ($650.00 per refill) will be purchased through a portion of each teacher's classroom budget as well as PTA contributions and fundraisers as necessary.

The WeatherBug Program will increase student achievement in core curriculum areas and address individual needs of students through the "limitless" lessons of WeatherBug Achieve. The program will also increase student interest in math and science providing positive results at all grade levels. The program will become another avenue to develop partnerships with parents and the community-- increasing support for both students and the district as a whole. The WeatherBug School program is an investment in the students, teachers, and the foundation of the future at Horseshoe Bend Schools.

Budget

A. Purchase WeatherBug Platinum: **$12, 990**

Platinum Package Features:

- WeatherBug Weather Station
- WeatherBug MotionCam with premium camera including pan/tilt/zoom capability
- Desktop Computer
- All necessary cabling and connections
- Lifetime site-license to WeatherBug Achieve
- Interactive tools and activities
- One year warranty

Interactive Tools and Activities Included in Above Package:

Displays the school's live weather conditions on the district's websites.

Receive weather alerts the moment they are issued by the national weather service. Allows access to live Doppler radar, air quality/pollen reports.

Hands on activities and experiments help students understand basic concepts about weather processes in the atmosphere. Available for Grades K-6 and 7-12

Special applet streams local live weather on any school or district website.

B. Professional Installation of WeatherBug **$2,500**

C. Purchase 20 computer systems to be used with WeatherBug program in each classroom K-12 **$16,000**

D. Purchase Color Printer for use in grades K-5 **$1,840**
HP Color Laser Jet 3505DN plus replacement toner
For use with mapping/graphing component of WeatherBug program

E. Professional Development Activities: **$ 16,650**
2 days of hands-on training by WeatherBug professionals

(Fall 08'/Spring 09'), substitute teacher pay, stipends,
workshop costs for professional development in integration
of technology in math, science and other core curriculum areas
(available for Lead teachers and other interested educators and administrators),
Lead teacher pay incentive for 3 teachers: $1000.00 per teacher

F. Evaluation Inservice in Boise
(attendance for 2 people) **$500.00**

G. Administrative Fee **$2500.00**

Total: **$52,980.00**

Superintendent Signature	**Date** 11/14/07
District Technology Coordinator Signature	**Date** 11-14-07
Project Director Signature	**Date** 11-14-07